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ELECTION.

Amory Edwards, Esq., of New York, and Charles H. Budd, M. D., of Pemberton, N. J., were elected *Members*, and Henry A. Ford, M. D., of Liberia, Western Africa, was elected a *Correspondent* of the Academy.

April 6th.

Vice-President BRIDGES in the Chair.

Letters were read

From the Royal Academy of Sciences at Vienna, dated October 26, and December 12, 1851, transmitting the "Denkschriften, Mathematische-Naturwissen. Classe," vol. 3, part 1, and "Sitzungsbericht, Mathemat. Naturwissen. Classe," vol. 6 and vol. 7, parts 1 and 2.

From Dr. F. H. Troschel, dated Bonn, Jan. 16, 1852, acknowledging receipt of Proceedings of the Academy, vol. 5, Nos. 3, 4, 6, 7 and 8, and requesting other numbers deficient in his series; also transmitting "Archiv für Naturgeschichte," No. 6, 1849, Nos. 2, 3, 4 and 5, 1850, and Nos. 1, 2, 3, 1851.

From the Royal Academy of Sciences of Naples, dated Jan. 24, 1852, acknowledging the receipt of late Nos. of the Proceedings.

A paper was presented by Col. George A. McCall, intended for publication in the Proceedings, describing a new species of *Carpodacus*. Referred to Mr. Cassin, Dr. Woodhouse and Dr. LeConte.

Dr. Woodhouse read a paper, intended for publication in the Proceedings, entitled, "Description of new species of Birds of the genera *Vireo*, *Vieill.* and *Zonotrichia*, *Swain.*," collected by the author in Texas, while attached to the late U. S. Expedition under Captain L. Sitgreaves, for exploring the Zuni and Colorado Rivers of the West. Referred to Col. McCall, Mr. Cassin and Dr. Wilson.

Dr. LeConte offered the following additional remarks on some fossil *Pachyderms*, from Illinois, referred to on page 3 of the present volume :

Having recently had an opportunity of inspecting an entire skull in the possession of Dr. Leidy, closely allied to, if not identical with the cranium described by me as *Hyops*, and afterwards as *Dicotyles depressifrons*, I have the satisfaction of being able to arrange this confusing mixture of bones in a natural manner. I have seen distinctly that the parts described as belonging to the upper jaw of *Platygonus compressus*, in reality belong to *Hyops*, but that the singularly dilated lower jaw associated with them, is part of another animal for which the name *Platygonus* must be retained. The large inferior canine referred to *Dicotyles depressifrons* is perhaps the canine of the genus with dilated jaw; at any rate, it cannot belong to *Hyops*, and until the canine of *Platygonus* is found in situ, it would be more natural to consider it as not indicating a third animal, of which no other trace remains.

The inferior molars and canine from another locality, on which the genus *Protochærus* was founded, also belong to *Hyops*. In palliation of this blunder, I may say, that the cranium and superior canines and molars of *Hyops* were associated with no lower teeth except those in the fragment of dilated jaw, which

certainly seemed to accord very closely in size and shape with the upper jaw. Any one who has observed the very close correspondence between the dentition of suiline pachyderms, and the great variation in different portions of the dental series, will appreciate the difficulty of apportioning properly small fragments of closely allied species, and will excuse the faults which I have unconsciously committed. As the best reparation for these errors, I subjoin the following synonyms of the fragments of the head, described by me:

Hyops depressifrons Lec. Am. Journal of Sc. 2d series, 5, 103.

Dicotyles depressifrons Lec. Proc. Ac. Nat. Sci. 6, 3.

(In part.) *Platygonus compressus* Lec. Am. Journal, l. c. and Trans. Am. Ac. Arts, N. ser. 3, p. 1, 2, 3.

Protochærus prismaticus Lec. Am. Journal, l. c. 5, 103: Proc. Ac. 6, 5.

The fragments to be here referred, are a cranium: fragments of anterior part of head with premolars and canines: the entire dental series of upper jaw: except the last molar, the canine and two inferior molars of lower jaw, the latter belonging to a smaller specimen of perhaps another species.

Platygonus compressus Lec. Am. Journ. l. c. and Trans. Am. Ac. Arts.

Lower jaw with two posterior molars: pl. 3, fig. 7.

Upper teeth,* posterior molar and two premolars: pl. 3, fig. 12 and 13, (left hand.)

Mr. Lea stated some of his views regarding species, and mentioned that the subject had engaged the attention of eminent naturalists, some of whom had given definitions, which did not fulfil his idea of what constituted that term. Lindley, in his Introduction to Botany, has given some very judicious and philosophic views on classification. "Species," he says, "are created by Nature herself, and remain always the same in whatever manner they may be combined; they form the basis of all classification, and are the only part of it which can be considered absolute." In this he makes no attempt to define his ideas of species. It is assumed to be a distinct creation, and unchangeable.

MM. Ray and Drouet ("Revue et Mag. de Zoologie, 1849") give their views of what forms a species, in the following terms: "Généralement on entend, par ce mot, (espèce) un type d'organisation de forme et d'activité, rigoureusement déterminé, qui se perpétue successivement par génération directe et d'une manière indéfinie avec la même constance de caractères."

Milne Edwards' definition of species, Mr. Lea thought was less clear. He says, "On donne le nom d'espèce à la réunion des individus, qui se reproduisent entre eux avec les mêmes propriétés essentielles."

Cuvier considered that the fact of the succession, and of the constant succession, constituted alone the validity of the species.

Dr. Morton comprised his view of species, as "a primordial organic form."

Neither of these definitions fulfil Mr. Lea's idea of what forms a species. It seemed to him, that a species must be considered to be a *primary established law*, stamped with a persistent form pertaining solely to itself, with the power of successively reproducing the *same form* and none other.

Mr. Lea also stated he was about to issue a new edition of his *Synopsis of the Family Naiades*, with much additional matter. That in the introductory part, he had given the classification of various zoologists, and among others those who had divided the *Naiades* by their anatomical differences, viz: D'Orbigny, Tro-schel, and Agassiz. In these he said it would be observed, by consulting the works of the two first, and a work entitled "Shells of New England," by Mr.

*The figures of these teeth were so badly drawn by the artist engaged by me, and still farther deteriorated and altered while in the hands of Mr. Endicott, that the minute differences which distinguish such closely allied animals are not to be seen: in excuse for permitting such figures to go before the world, I must say that the memoir was printed during my absence on a scientific expedition, and that no opportunity was offered for correcting the proof.

W. Stimpson, who cites Prof. Agassiz's MSS., that they do not differ essentially in their modes of division. Mr. Lea farther remarked, that our knowledge of the structural differences of the soft parts of these animals, he thought, was not sufficiently advanced to found a perfect and permanent system. That such a one would be instituted he had no doubt, as he had expressed himself in 1838, in a note on *Anodonta Blainvilliana*, in the second edition of his Synopsis, p. 31, and he trusted, that the able physiologists above cited would continue their investigations; but he was disposed to think that, until zoologists had examined carefully the soft parts of most of the existing numerous species,—the exo-skeletons* (so to call them) of which have only come under our notice—the facilities which a good system ought to afford, cannot be reaped by a partial anatomical knowledge, which does not now embrace probably one eighth of the ascertained species of the family. Besides, he was not at all disposed to think, that we can entirely dispense with the aid we find in the various characters of the exo-skeletons in making out subgroups. They often, indeed, afford striking and obvious differences, which the eye schooled with but little experience, can with facility and certainty detect, and which if happily grouped by an experienced eye may greatly aid the student. These considerations had induced him still to retain nearly the same divisions in the new edition of the Synopsis, which had been used in the last one.

April 13th.

Vice President BRIDGES in the Chair.

Letters were read

From the Lyceum of Natural History, of New York, dated March 24, 1852, acknowledging the receipt of a copy of the "Notice of the Academy," recently published.

From Commodore Perry, dated New York, April 9, 1852, addressed to Dr. Ruschenberger, expressing his desire and intention to comply with the request of the Academy to make scientific researches in the East Indies, during the cruise of the U. S. Squadron on that station.

Dr. LeConte read a paper entitled, "Remarks on some Coleopterous Insects, collected by S. W. Woodhouse, M. D., in Arkansas and New Mexico," which was referred to Dr. Leidy, Dr. F. Beck, and Dr. Ruschenberger.

Dr. Zantzinger presented a paper from Mr. Charles Girard, of Washington, entitled, "Observations on the North American Astaci, by Charles Girard;" which being intended for publication, was referred to Dr. Bridges, Dr. LeConte and Dr. Leidy.

Dr. Hallowell read a paper describing new species of Reptilia from Western Africa; which was referred to Dr. Woodhouse, Dr. LeConte and Mr. Lea.

Mr. Lea read a note from Wm. H. Prescott, Esq., dated Boston, April 8, 1852, accompanying his donation of the rare work "Registro trimestre," announced this evening.

On motion of Mr. Lea, the thanks of the Society were unanimously presented to Major LeConte for the valuable donation announced this evening, of his entire herbarium of North American Plants.

*Forming the calcareous coverings and fulcra for muscular fibres, as well as protection from exterior forces.